

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

DETMOL-vap

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Pesticide

1.3. Details of the supplier of the safety data sheet

Company name: FROWEIN GmbH & Co. KG

Street: Am Reislebach 83

Place: D-72461 Albstadt

Telephone: +49 (0) 74 32-956 - 0

Telefax: +49 (0) 74 32-956 - 138

Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone number: Emergency telephone :+49 (0) 6132 / 84463 (GBK GmbH, Ingelheim)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: Xn - Harmful, Xi - Irritant, N - Dangerous for the environment

R phrases:

Flammable.

Irritating to respiratory system.

Risk of serious damage to eyes.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Harmful: may cause lung damage if swallowed.

Repeated exposure may cause skin dryness or cracking.

Vapours may cause drowsiness and dizziness.

GHS classification

Hazard categories:

Flammable liquid: Flam. Liq. 3

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 3

Aspiration hazard: Asp. Tox. 1

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

May cause respiratory irritation.

Causes serious eye damage.

Causes skin irritation.

May cause drowsiness or dizziness.

Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazardous components which must be listed on the label

Solvent naphtha (petroleum), light arom.

Calcium dodecylbenzenesulphonate

2-Methylpropan-1-ol

Pyrethrins and Pyrethroids

Signal word: Danger

Pictograms: GHS02-GHS05-GHS07-GHS08-GHS09



Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H335	May cause respiratory irritation.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P260	Do not breathe vapour.
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to in accordance with local and national regulations.

2.3. Other hazards

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation with aromatic hydrocarbons

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
265-199-0	Solvent naphtha (petroleum), light arom.	
64742-95-6	Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R10-37-51-53-65-66-67	< 45 %
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066	
01-2119455851-35		
259-154-4	1-ethynyl-2-methylpent-2-enyl 2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate	< 30 %
918500-11-5	N - Dangerous for the environment R50-53	
	Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 1 (M-Factor = 1); H400 H410	< 10 %
247-557-8	Calcium dodecylbenzenesulphonate	
26264-06-2	Xi - Irritant R38-41	
	Skin Irrit. 2, Eye Dam. 1; H315 H318	< 5 %
265-149-8	Distillates (petroleum)	
64742-47-8	Xn - Harmful R65-66	
	Asp. Tox. 1; H304 EUH066	< 5 %
201-148-0	2-Methylpropan-1-ol	
78-83-1	Xi - Irritant R10-37/38-41-67	< 2,5 %
603-108-00-1	Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3, STOT SE 3; H226 H315 H318 H335 H336	
01-2119484609-23		
232-319-8	Pyrethrins and Pyrethroids	< 2,5 %
8003-34-7	Xn - Harmful, N - Dangerous for the environment R20/21/22-50-53	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Aquatic Acute 1 (M-Factor = 100), Aquatic Chronic 1 (M-Factor = 100); H302 H312 H332 H400 H410	

Full text of R-, H- and EUH-phrases: see section 16.

Further Information

According to note P to the regulation (EC) no. 1272/2008, "Solvent naphtha (petroleum)" is not to be classified as "carcinogenic" or "mutagen" ingredient because a benzene content (EINECS No. 200-753-7) is below 0.1 % by weight.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

After contact with skin

Wash off immediately with plenty of water and soap for at least 15 minutes.
Consult a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult (eye) doctor immediately.

After ingestion

Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.

Summon a doctor immediately.
Induce vomiting only upon the advice of a physician.
Attention. Beware, danger of aspiration.

4.2. Most important symptoms and effects, both acute and delayed

May be fatal if swallowed and enters airways. Attention. Beware, danger of aspiration.
Causes skin irritation.
Causes serious eye damage.
May cause drowsiness or dizziness.
May cause respiratory irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:

Carbon monoxide, carbon dioxide, sulphur oxides and nitrogen oxides (NO_x).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Vapours are heavier than air and spread along ground.

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.

Cool containers at risk with water spray jet.

Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.

Use only explosion-proof equipment.

Ensure adequate ventilation.

Remove persons to safety.

Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Shovel into suitable container for disposal.

Clean contaminated surface thoroughly.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).

Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed.

Vapours are heavier than air and spread along ground.

Avoid contact with the skin and the eyes.

Use only in thoroughly ventilated areas.
Do not breath vapours or spray mist.

Advice on protection against fire and explosion

Do not smoke - volatile.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Use only explosion-proof equipment.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.
Pay attention to anti-explosion rules.

Advice on storage compatibility

Incompatible with:
Oxidizing agents, Acids and bases.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Pesticide

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	WEL
8003-34-7	Pyrethrum (purified of sensitising lactones)	-	1		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Do not breath vapours or spray mist.
Wash hands before breaks and immediately after handling the product.
When using do not eat, drink or smoke.
Treat subsequently with skin cream.
Take off immediately all contaminated clothing.
Avoid contact with skin, eyes and clothing.

Eye/face protection

Tightly fitting goggles (EN 166).
Eye wash bottle with pure water (EN 15154).

Hand protection

Use multipurpose protective gloves (plant protection) when spreading/handling the product (EN 374).
Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Wear standard protective suit (plant protection) when spreading/handling the product (CE 93 0120).
Rubber apron (EN 467).

Respiratory protection

Use protective face mask with A1-P3 (40 ASt) filter when spraying (EN 141).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	Brownish	
Odour:	Hydrocarbon-like	
Initial boiling point and boiling range:	> 166 °C	*)
Flash point:	approx. 35 °C	
Lower explosion limits:	0,7 vol. %	*)
Upper explosion limits:	7,0 vol. %	*)
Vapour pressure:	3 hPa	*)
(at 20 °C)		
Density (at 20 °C):	0,904 g/cm³	
Water solubility:	Emulsifiable	
(at 20 °C)		
Ignition temperature:	480 °C	*)
Solvent content:	< 75 %	

9.2. Other information

*) Solvent naphtha (petroleum), light arom.

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with acids, alkalies and oxidizing agents

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

Vapour/air mixtures are explosive at intensive warming.

Heating can release vapours which can be ignited.

10.5. Incompatible materials

oxidizing agents, Acids and bases.

10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, sulphur oxides, and nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

No toxicological data available.

ATEmix calculated

ATE (inhalative vapour) 16,44 mg/l

Irritation and corrosivity

Causes serious eye damage.

Causes skin irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (Solvent naphtha (petroleum), light arom.), (2-Methylpropan-1-ol)

May cause drowsiness or dizziness. (Solvent naphtha (petroleum), light arom.), (2-Methylpropan-1-ol)

Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience

Other observations

Repeated exposure may cause skin dryness or cracking.

High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects .

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Occasionally literature hints report that contact with Pyrethrum compounds may trigger hay fever similar reactions in particularly sensible persons.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

Very toxic to aquatic life with long lasting effects.

1-ethynyl-2-methylpent-2-enyl 2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

LC50/Fish/96 h = 0,0017 mg/l

EC50/Daphnia/48 h = 0,02 mg/l

EC50/algae/72 h = 0,2 mg/l

Pyrethrum

LC50/Oncorhynchus mykiss/96 h = 0,005 mg/l

LC50/Lepomis macrochirus/96 h = 0,01 mg/l

LC50/Cyprinodon variegatus/96 h = 0,016 mg/l

EC50/Daphnia magna/48 h = 0,012 mg/l

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Severe hazard to waters

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

200119 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); pesticides
Classified as hazardous waste.

Waste disposal number of used product

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Re-using the polluted packaging materials is not allowed.

Contaminated packagings are to be treated like the product itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg

Marine transport (IMDG)

14.1. UN number: UN3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S. (1-ethynyl-2-methylpent-2-enyl 2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate)
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Marine pollutant: Yes
Limited quantity: 5 L / 30 kg
EmS: F-E, S-D

Air transport (ICAO)

14.1. UN number: UN3295
14.2. UN proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

14.3. Transport hazard class(es):

3

14.4. Packing group:

III

Hazard label:

3



Limited quantity Passenger:

Y344 / 10 L

IATA-packing instructions - Passenger:

355

IATA-max. quantity - Passenger:

60 L

IATA-packing instructions - Cargo:

366

IATA-max. quantity - Cargo:

220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:

yes



14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

1999/13/EC (VOC):

< 75 %

National regulatory information

Employment restrictions:

Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

Relevant R-phrases (Number and full text)

10	Flammable.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
37	Irritating to respiratory system.
37/38	Irritating to respiratory system and skin.
38	Irritating to skin.
41	Risk of serious damage to eyes.
50	Very toxic to aquatic organisms.
51	Toxic to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Relevant H- and EUH-phrases (Number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)